What is claimed is:

1. A data communications system comprising:

an outside plant, the outside plant including a distribution fiber, a splitter and a plurality of drop fibers;

a head-end, the head-end being coupled to the splitter via the distribution fiber;

a first network unit, the first network unit being coupled to the splitter via a first of the plurality of drop fibers, wherein the first network unit receives a first upstream data stream from a first user source in a packet format, modulates a first signal with the first upstream data stream and transmits the modulated first signal to the head-end via the outside plant; and

a second network unit, the second network unit being coupled to the splitter via a second of the plurality of drop fibers, wherein the second network unit receives a second upstream data stream from a second user source in a packet format, modulates a second signal with the second upstream data stream and transmits the modulated second signal to the head-end via the outside plant,

whereby the first and second network units can transmit the modulated first and second signals to the head-end substantially simultaneously without collision.

2. The system of claim 1, wherein at least one of the first and second signals is a carrier signal.

3. The system of claim 1, wherein at least one of the first and second network units receives upstream data via an Ethernet interface.

4. The system of claim 1, wherein the first and second network units comprise optical network units.

5. The system of claim 1, wherein the head-end receives the first and second upstream data streams and provides the first and second upstream data streams in a packet format.

6. The system of claim 1, wherein the head-end comprises an Ethernet adapter circuit.

7. The system of claim 1, wherein each network unit includes:

an adapter circuit, the adapter circuit receiving the upstream data;

a modulator, the modulator being coupled to the adapter circuit and modulating the carrier signal with the upstream data; and

a transmitter, the transmitter being coupled to the modulator and generating an optical signal in accordance with the modulated carrier signal.

8. The system of claim 7, wherein each network unit includes a bias control circuit coupled between the modulator and the transmitter, the bias control circuit disabling the transmitter in the absence of a signal from the modulator.

9. The system of claim 7, wherein the modulator comprises a quadrature phase-shift keying modulator.

10. The system of claim 7, wherein the modulator comprises a frequency-shift keying modulator.

11. The system of claim 7, wherein the transmitter includes a 1.3 μm laser.

12. The system of claim 7, wherein the adapter circuit provides an Ethernet interface for coupling to a data communications device.

13. The system of claim 1, wherein the head-end transmits a downstream data stream to the first and second network units via the outside plant.

14. The system of claim 1, wherein:

the head-end includes a transmitter, a receiver and a wavelength-division multiplexing device, and

each network unit includes a transmitter, a receiver, and a wavelength-division multiplexing device,

wherein in each of the head-end and the network units, the wavelength-division multiplexing device is coupled to the outside plant, the receiver and the transmitter, the wavelength-division multiplexing device coupling optical signals of different wavelengths on the outside plant.

15. The system of claim 14, wherein the receiver in the head-end and the transmitters in the network units operate at a first wavelength and the transmitter in the head-end and the receivers in the network units operate at a second wavelength.